

Is It Safe to Donate a Kidney?

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This article is the second in our series addressing new trends in living donor kidney transplantation. As we implied in the last issue, none of us would be writing or reading this material without the courage of pioneering surgeons and live kidney donors in the earliest days of clinical transplantation. However, even those pioneers recognized the potential consequences of performing a major operation on an otherwise healthy person for the benefit of someone else. Their decision to proceed was based on three assumptions: the transplant should occur only if there is a good chance of a successful outcome in the recipient, low risk to the donor and voluntary consent of all involved. (Merrill et al, 1956) Now, after almost 50 years, these three

felt the risk of surgery was lower than the risk of the test itself! Current standards of testing, with dramatically lower complication rates, indicate just how far we've come.

The best-documented risks associated with donating a kidney are those of the operation itself. Some kidney donors have died in the process, with the risk said to be 0.03 percent (3 in 10,000). This is similar to the risk of death with any procedure performed under general anesthesia. (Bay and Hebert, 1987)

Over 90 percent of donors experience no complications at all; a small percentage suffers typical surgical complications such as bleeding, wound infections, fever, constipation, atelectasis (failure to fully expand small air sacs

low-up, a deficiency the transplant community is working hard to correct. A recent, alarming paper from the United Network for Organ Sharing documented 56 previous living donors who eventually needed a transplant themselves. (Ellison et al, 2002) However, even the authors recognize the inadequacy of this number in helping to determine the actual risk of ultimately losing kidney function after donation. Are there other cases out there? Probably. Unless there are many more, however, risk of kidney failure after donating seems little different from the risk of ESRD in the general population (0.03 percent). Comprehensive data from Sweden and Switzerland indicate no increased risk to donors, at least over a 5 to 10 year period. (Fehrman-Ekholm, 2001)

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criteria remain the cornerstone of our approach to live donors. Outcomes in recipients are better than ever, and the need for informed consent is ingrained in our psyches. But, how much more do we really know about donor risk?

Donor risks fall into three categories: those associated with diagnostic tests, the surgical procedure itself, and living the remainder of one's life with a single kidney. Evaluation of potential donors involves what most would label as minor risks, such as bruising from blood sampling, bleeding from needle sticks or a reaction to administration of intravascular contrast dyes. Even though these occur rarely, they can be a major problem in an occasional donor. The Boston surgeons of the 1950s avoided imaging the kidneys with x-rays and contrast because they

in your lungs) or blood clots. These are typically not life threatening, but may prolong recovery. Many donors experience enough muscle soreness to preclude vigorous activities for several weeks, but eventually go on to full recovery. A recent survey of donor operations performed at US transplant centers since 1999 shows complication rates of fewer than one percent, and indicates that laparoscopic nephrectomy is no riskier than the open procedure. (Matas et al, 2002)

Finally, what does it mean to go through life with one kidney? Potential long-term complications remain the greatest concern of professionals involved with live donor transplantation. Unlike the minute, precise data collected regarding outcomes in recipients, there is no standard for donor fol-

The spotty information currently available from the United States indicates slight risk of proteinuria and high blood pressure in donors after 10 to 20 years, but at rates similar to what might be expected in non-donors over that period of time. New efforts are underway to define long-term donor risks more precisely.

Thus, while the data we have remain incomplete, they paint a picture consistent with the original Boston mandate: not a total absence, but low risk for kidney donors. As more and more people contemplate giving a kidney to a loved one, each will have to weigh these adverse consequences in light of his or her own individual situation. We in the transplant community remain committed to doing everything possible to ensure the safety of those who entrust us to deliver their gifts of life. **TC**